

Northumbria Research Link

Citation: Lhussier, Monique, Dalkin, Sonia and Hetherington, Ross (2019) Community care for severely frail older people: developing explanations of how, why and for whom it works. *International Journal of Older People Nursing*, 14 (1). e12217. ISSN 1748-3735

Published by: Wiley-Blackwell

URL: <https://doi.org/10.1111/opn.12217> <<https://doi.org/10.1111/opn.12217>>

This version was downloaded from Northumbria Research Link:
<http://nrl.northumbria.ac.uk/id/eprint/36911/>

Northumbria University has developed Northumbria Research Link (NRL) to enable users to access the University's research output. Copyright © and moral rights for items on NRL are retained by the individual author(s) and/or other copyright owners. Single copies of full items can be reproduced, displayed or performed, and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided the authors, title and full bibliographic details are given, as well as a hyperlink and/or URL to the original metadata page. The content must not be changed in any way. Full items must not be sold commercially in any format or medium without formal permission of the copyright holder. The full policy is available online: <http://nrl.northumbria.ac.uk/policies.html>

This document may differ from the final, published version of the research and has been made available online in accordance with publisher policies. To read and/or cite from the published version of the research, please visit the publisher's website (a subscription may be required.)



**Northumbria
University**
NEWCASTLE



UniversityLibrary

Community care for severely frail older people: developing explanations of how, why and for whom it works

Abstract

Background: A Community Wellness Team was implemented in the North East of England in 2014, in line with national policy directives to support frail older people in the community.

The service provides a comprehensive and integrated care package, which aims to reduce avoidable admissions, inappropriate service use and enable patients to stay at home.

Design: A realist design combining a review of the literature and primary data collection from service providers and patients was used to develop programme theories explaining the links between the Team interventions and expected outcomes.

Results: Five programme theories were developed, detailing: trust development and relationship building; risk minimisation in the home environment; advice on self-management; referral to preventative services; coordination of services.

Discussion: The programme theories explain the role and impact of the Community Wellness Team. These programme theories are interrelated and impact one another; a hypothesised progression of programme theories indicating how the Community Wellness Team 'works' is discussed. Of particular importance was the comprehensive initial assessment, which leads to the alteration of the social and physical environment within which older people live.

Conclusion: Severely frail older people present cases that are complex socially, medically, financially and environmentally. In order to meet these needs, the Team coordinators are adopting a complex and flexible person centred approach.

Keywords: *Integrated services, vulnerable adults, home care, care coordinator, wellness, realist evaluation, severe frailty*

Implications for practice

What does this research add to existing knowledge in gerontology?

- Community support for severely frail older people works best through complementing pre-existing informal care networks.
- Key aspects are the development of trusting relationships, continuity in care, and consideration for the broad psychological, social and environmental needs of the severely frail older person.

What are the implications of this new knowledge for nursing care with older people?

- In community care for severely frail older people, nurses operate best within a wellness framework that allows them the time to develop trusting, stable and long lasting relationships with patients.
- Nurses need to be able to attend not only to health care needs, but also meet the environmental, psychological and social needs of severely frail older people living at home.
- Our research supports claims that person-centred care requires active participation, empowerment and leadership from staff and patients in the co-production of their health.

How could the findings be used to influence policy, practice, research or education?

- This study paves the way for further research into the care networks surrounding severely frail older people living in the community, and how they can most effectively be implemented.
- Research concerning the number and type of care providers involved, their tasks, and the interactions between the individual care providers, and the relationship with severe frailty is in its infancy.

Community care for severely frail older people: developing explanations of how, why and for whom it works

Background

A Community Wellness Team (CWT) was established in the North East of England in 2014, in line with national policy directions to shift the balance of care from hospital to community (Imison et al., 2017). The Team provides a comprehensive and integrated care package for severely frail patients aged 75 or older, with the aim of reducing avoidable hospital admissions and enabling home living for longer. Key components of this include care planning, advanced care planning, care coordination and case management. The Team's approach inscribes itself within a wellness framework that promotes self-management and shared decision-making. They aim to address social isolation, which has been identified as a risk factor for hospitalisation (Giuli C et al., 2012). Thus the CWT provides preventative care, whilst maximising both vertical (community, primary and secondary care) and horizontal (health, social and other care services) integration.

A federation of 12 general practices serving an overall population of 91,092 delivers the service, in a rural area with dispersed small villages and market towns in the North of England, where older people tend to be resilient and resistant to "bother the doctor". The electronic frailty index is based on the accumulation of clinical signs (e.g. tremor), symptoms (e.g. vision problems), diseases, disabilities and abnormal test values. Patients scoring over 0.36 and are classed as severely frail (around 2000 patients) and are flagged on General Practitioners (GPs) systems. GPs then use additional clinical judgement to decide whether the person would benefit from a referral to the CWT. The Team includes Nurse Practitioners

(including mental health nurses), Specialist Nurses (COPD, heart failure and geriatrics), Healthcare Assistants and Care Coordinators. This article reports on an initial small-scale study of the CWT, which is set to pave the way for a more thorough evaluation.

Literature

With changes in demographics internationally and public service purses being tightened, health and social care services have to find new, more cost effective ways to meet rising demand. International policy has focused on 'ageing in place' as one way to meet cost demands whilst also adhering to patient preferences (World Health Organisation, 2015). Ageing in place refers to 'the ability of older people to live in their own home and community safely, independently, and comfortably, regardless of age, income or level of intrinsic capacity. This is generally viewed as better for the older person and may also hold significant financial advantages in terms of health-care expenditure' (World Health Organisation, 2015, pg. 36). In the UK in particular, there is a policy and practice trend to move care away from costly secondary care services, and closer to people's homes (Imison et al., 2017). Case management, care co-ordination and integrated care have become well established and have characteristically been provided through multidisciplinary and community-based health and social care teams. Typically, these teams focus on improving care post-discharge from hospital and/or to avoid hospitalisations by concentrating on 'at risk' individuals in the community (Wodchis et al., 2015, Goodwin et al., 2013, Goodwin, 2016, Pearson et al., 2015, Janse et al., 2017). There are debates within the literature on the specific definitions of each term, which are beyond the scope of this study, although we draw on this body of work. For the purpose of this study, the search terms were developed based on what the CWT understood their practice to be, rather than academically

established consensual definitions. The CWT shares some of its features with other place based ageing interventions, such as those described in the CAPABLE trial in the United States of America (Szanton et al., 2014). There are however key differences, in that the population looked after by the CWT is significantly older, and the intervention is not time limited.

At the level of individuals, the presence of a named coordinator, who can facilitate access to care and provide continuity to focus on supporting service users and carers to become resilient has been suggested to be preferable to a purely clinical focus (Goodwin et al., 2013). Care co-ordination programmes take time to mature and become accepted by professionals, patients and embedded through care settings (Goodwin et al., 2013). The National Coalition on Care Coordination states that care coordination should: be patient centred; supportive of family and informal caregivers; accessible; take an interdisciplinary approach; focus on chronic care and health care transitions in particular; bridge health and social services; employ a comprehensive assessment; and implement and monitor a flexible care plan (National Coalition on Care Coordination, accessed June 2018). There is thus a broadly consensual understanding of what successful approaches to care co-ordination and integrated care should contain (Goodwin et al., 2013). However, the lack of evaluation in this area means there is scant evidence to support a positive association between better care co-ordination, integrated care and improved patient experiences, care outcomes and financial efficiencies (Imison et al., 2017).

The aim of the study was to develop initial explanatory (programme) theories to enhance understanding of the CWT, who it works for and in which circumstances.

Methodology

Realist evaluation is a theory driven approach, underpinned by scientific realism, which seeks to understand not only whether an intervention works, but how it works, for whom and in what circumstances (Pawson and Manzano-Santaella, 2012). It acknowledges that interventions take place within complex social systems (Pawson and Tilley, 1997) and is therefore well suited to studying interventions, such as the CWT, with complex and potentially multiple pathways from implementation to impact. The formulae Context + Mechanism (Resource and Reasoning) = Outcome (C+M=O) is used as a heuristic to make explicit the ways in which interventions may have different effects depending on the contexts into which they are introduced (Westhorp et al., 2011, Dalkin et al., 2015). Using CMO configurations, causation is thought of as generative (Pawson and Tilley, 1997), driven by underlying causal mechanisms including resources provided by the intervention, and reasoning of the participants. However, these mechanisms only ‘fire’ when they occur in a facilitative context, leading (or not) to observed outcomes. For example, a care visit is considered to be a resource that alters the context into which it is introduced (C; the severely frail older person’s life with co-morbidities and difficulties caring for themselves), triggering a change in patients’ reasoning (M; their self-efficacy to remain at home increases), leading to a particular outcome (O; reduced unplanned admissions). If the severely frail older person were currently managing well at home, potentially with regular support from family, then care visits would be less likely to reduce unplanned admissions.

CMO configurations are used as explanatory formulae (otherwise referred to as realist programme theories), which are 'tested' through empirical data and refined as the research progresses. They thus postulate potential causal pathways between interventions and impacts, and expose the underlying mechanisms through which different components of an intervention can logically lead to measured outcomes.

Methods

The CWT is operationalised through a combination of care planning, advanced care planning, case management and care coordination. However, based on their experiences, CWT members thought that the key to their success came from the fact that they reduce social isolation. Searches were conducted in the Northumbria University search engine (which includes key databases, such as CINAHL, MEDLINE and ASSIA) combining each of these terms in turn with 'social isolation'. This highlighted 15 articles that focused on older people. Reference lists of these key articles were then checked for any reference clarifying in particular the process of care planning, advanced care planning, case management or care coordination in severely frail older people. Systematic reviews, or reviews of reviews were prioritised as they gave instant access to a breadth of literature on the topic. Twenty-six articles were thus uncovered, all focussing on severely frail older people. Each article was submitted to a systematic data extraction phase, detailing author, title, brief quality appraisal and methods detail, and potential context, mechanisms and outcomes. This phase was key in formulating initial realist programme theories.

A focus group was undertaken with all CWT members (n=7 participants) and aimed to 1) gain a greater understanding of how the CWT functioned 2) understand the specific contextual factors that may impact on the CWT and 3) to address gaps in knowledge in reference to the literature review. The focus group was digitally recorded and transcribed verbatim.

Two CWT members undertook the interviews with a convenience sample of five patients. The care coordinators, who have established relationships of trust with patients acted as co-researchers and approached potential participants in person. A patient interview schedule was formulated based on the findings of the literature review and the focus group discussion. The interviews were recorded, transcribed verbatim and incorporated in the realist analysis.

The participating patients were also asked whether they would agree for their anonymised case notes to be shared with researchers. In turn, these, which provided invaluable information on the socio-medical contexts of the intervention, were incorporated in the realist analysis. Patients were all 75 years or older and on the current CWT caseload. All primary (focus groups and interviews) and secondary (medical case notes; literature review) data and were analysed within the realist framework. Practically, the data was screened for context, mechanisms and outcomes which could impact on one another. This led to the formulation of five programme theories detailed in the following section.

Ethical approval was granted through Northumbria University Ethics Committee. Given the local nature of the data collected and limited number of participants, this was considered an evaluation study with little potential for generalisability across settings; the local R&D office

confirmed that the study did not require REC approval. However, every step was put in place to protect anonymity and introduce as little disruption in people's routines as possible. After receiving a study information leaflet and being given the opportunity to ask questions, patients were asked to sign a consent form, through which they could agree to take part in the interviews, the case note sharing, both or neither. It was made clear to them that they could withdraw from the data collection at any point and that this would not affect their care in any way. The potential implications of using gatekeepers are discussed in the limitation section.

Findings

Our analysis points to the CWT operating a five-pronged approach to the prevention of hospital admissions. These are presented in the following paragraphs as realist programme theories, illustrated by quotes from interviews with patients (P1 to P5), the focus group (FG) and observations from their medical case notes (CN). In the following section, each programme theory is stated in turn, and supporting evidence is provided.

1. Trust development and relationship building

Programme theory 1: In a context where patients are severely frail, socially isolated and are often resilient and reluctant to use National Health Service (NHS) resources (Context), the CWT offers an hour long initial assessment, personal continuity, and solves pragmatic issues (M - resources). This leads to rapport and trust being established between the care coordinator and the patient (M- reasoning), who is then keen to engage with the Team and

their advice (proximal Outcome). On the longer-term, patients are more likely to access more appropriate, preventative, services (distal Outcome).

The literature exposes how despite socio-cultural and disease-related complexities, patients often pursue the (unrealised) ideal of an engaged therapeutic relationship with an understanding clinician (Sheridan et al., 2012). This was corroborated by the data:

P2: "My doctor stands and leans on there and she just says yes and no and err, I'll say are you coming again? Err well yes, in about a fortnight's time. And sometimes she never comes at all. So what do you do? Either ring them, or, don't bother.

Interviewer: And you tend to... Not bother."

Social isolation among older, severely frail people is an acknowledged health risk linked to hospitalisation, both in the literature (Longman et al., 2013, Windle et al., 2011, Mistry et al., 2001) and by the Team:

"I think it heightens or compounds any condition that they have really when they're socially isolated." (FG)

In this context, taking time to undertake the initial assessment was seen as key in establishing rapport:

"You go in there and the first assessment is an hour, you give yourself an hour, as district nurses you only get 10 minutes... the patients know that [district nurses are] going in there to do what you need to do, and then you're back out..." (FG)

Brophy (2014) corroborates this, highlighting how in successful models "first-name, caring, personal relationships in which the care coordinator was an advisory friend who got to

know the individual and connected with him or her at a personal level” (p.397) is key. This continuity of care and personal relationship could take the shape of the CWT pre-empting needs at weekends for example:

“It’s putting systems in place so that they know, you know, particularly vulnerable ones I have been known to ring them on Friday and then ring them on Monday. So Friday to make sure they’re ok for the weekend and Monday, as a bit of reassurance, and putting rescue packs in with medication for recurring UTIs [Urinary Tract Infections] or CPD [Cardio Pulmonary Disease] management, just to give them that bit of reassurance.” (FG)

The literature highlights personal continuity and enabling access to care as key ingredients in care coordination (Goodwin et al., 2013, Roland et al., 2012, Wodchis et al., 2015, Naithani et al., 2006). The CWT establishes rapport through taking the time to get to know patients and assessing their social and mental health needs, as well as their physical health. The Team is well aware of the crucial importance of continuity of care for patients:

“I always leave them my number and I say, you know, I will visit them again in 6 months but if they have anything in the interim or if they have any queries or anything they’re not sure about then I give them it on the big blue post-it note and then they can give me a ring. (I: and do they?) They do!” (FG)

Cornell et al. (2012) emphasise the importance of relationship building and trust. The link between long term care and the need to reduce social isolation has also been highlighted by Longman (2013), Russel and Schofield (1999) and Mystry (2001), particularly with regards to the time it takes to build relationships. This was reflected in the focus group:

“Once you sort of make that connection and build that relationship it goes a long way to trust, it’s the trust. [...] I’m the only person that she’ll speak to, that she feels is listening to her.” (FG)

Cattan et al. highlighted a weak link between home visits and reduction in social isolation (2005). Focus group members agreed with this, explaining how single visits would not allow sufficient time to develop a supportive relationship:

“You maybes need to go back two or three times until they accept you as part of their life as a carer, someone who cares for them, and it’s a gradual process.” (FG)

The time spent in the visits and the quality of the relationship is therefore key to achieving an impact. This is further demonstrated by patients’ keenness to engage with the CWT:

P1: “I look forward to you coming... you have helped me. Set my mind at rest.... I can trust you”

P5: “If we’ve got a problem ... we can always rely on you.”

These comments reflect people’s social isolation as well their appreciation of the contact with the CWT. They are then keen to engage further as they feel they receive reliable help and information, which is key for self-care.

P5: “it’s nice when you can pick it up and just get good solid information from you.”

This programme theory was the most substantiated by our data, reflecting the central importance of the personal relationships the CWT fostered.

2. Risk minimisation in the home environment:

Programme theory 2: Patients are severely frail older people who live in environments ill adapted to their needs (Context). The CWT offers achievable advice and solves practical issues (M - resources). This leads to trust in the CWT and other NHS services (M - reasoning), which leads to risk minimisation (proximal outcome) and prevention of potential accidents (Distal outcome).

The focus group highlighted unsuitable home environments:

“The lady [we] went to see was putting her bin bags in a wheel barrow and wheeling them down a really long track to the main road because the bin men won’t go up to her house to collect the rubbish.” (FG)

This 82-year-old woman lives independently. She has asthma, osteoporosis, hypertension, mild dementia, digestive troubles and depression. She doesn’t have central heating, is known to collect firewood by hand and has previously fallen in the woods. (CN) In this complex socio- medical context, the CWT provides practical and achievable advice, and addresses key practical issues: *“I rang the council [so bins would be collected directly outside the house]”* (FG). The CWT also arranged a loft insulation, as the house was very cold and she was therefore at risk of chest infections over the winter (CN). These small but significant interventions helped build trust and minimise risks.

“By the next week I got a phone call from her saying they [bin men]’d come to her house and collected it... So now she’s over the moon and she would like us to help her with other things.” (FG)

Potential accidents were thus avoided and the patient felt able to engage further. As this was a lady who would not have normally engaged with health care professionals, it was a

significant and positive step. Evidence from the literature suggests that an effective, problem solving care coordination model can encourage such patients to become more proactive in the management of their own care, improve their mental health and quality of life (Goodwin et al., 2013, Claiborne, 2006). Bass (2013) highlights how health impact may take up to six months to become apparent, which corroborates the Focus Group data on the time it takes to build effective relationships. Impacts on clinical adherence, patient experience and utilization outcomes have been shown in the literature (McDonald et al., 2007). An example was provided of a patient who was receiving a GP visit twice a week over an extended period of time, because of the complexity of her needs:

“We managed to get that lady persuaded to be catheterised which has stopped her [recurring] urine infections [...] so symptomatically really she’s a lot better. She’s got emphysema so she’s not up and down to the toilet so frequently so it’s helped with her breathing, so it took quite a while to manage her but she probably now only gets a [GP] visit once every 3 weeks and perhaps a telephone call once a week or once a fortnight. So it’s had a big impact on her.” (FG)

This approach to risk minimisation also contributes to programme theory 1 (trust development and relationship building), as the solving of practical issues serves to demonstrate the reliability and dependency of the CWT, which in turn means that patients are more likely to engage for other health related issues.

3. Advice on self-management

Programme theory 3: For patients with complex and changing needs linked to multimorbidities (Context), the CWT offers practical and achievable advice, including rescue

packs, frequent contacts and solutions to broader issues (M - resource). This provides increased knowledge of what to do in an emergency or at weekends / reassurance that the issue can be dealt with at home (M - reasoning); this means that exacerbations are better managed (Outcomes).

P3 is a 90-year-old woman with osteoarthritis, hearing loss, kidney disease, hypertension, diabetes, angina and recurrent urinary tract infections (CN). Whilst her physical health issues are being treated at the GP surgery, the team describes a *“spiral of loneliness, depression and psychosomatic issues with this lady. Her usual social support network has broken down of late because of ill health and perceived loneliness”* (CN). Lots of practical and achievable advice was given in response, including rescue packs, frequent contacts and solutions to broader issues. This was operationalised through frequent Team visits and organised periodic admissions in a care home enabled her to rest and be cared for in a safe environment, while not leaving her home permanently. Her case notes state: *“She is struggling to retain her independence at home but I feel that a period of periodic respite would significantly improve her quality of life and her affect which is currently quite low.”* (CN) The literature also emphasises the need for such broad preventative interventions (Peikes et al., 2009, LeBlanc and Jacelon, 2018), which were further corroborated in the focus group:

“And there’s lots of patients with chronic obstructive airways [disease], that exacerbate and end up in hospital so we’ve worked with the patients doing management medications, management information, so that they have rescue packs, so that they can start the treatment to avoid them going into hospital.” (FG)

In response to this, patients have increased knowledge of what to do in an emergency or at weekends and is reassured that the issue can be managed at home. P3 also knows that she can access periodic respite, where all of her needs are addressed in one place but then return home. She states:

P3: "It's getting harder to make meals and I'm ready for that rest and, as I say, (Team coordinator) has followed through to ensure I get that rest."

Giving this patient periodic episodes of rest, where all her needs (including social needs) can be catered for without losing her home, has significantly improved her quality of life, and her ability to cope between care episodes. She now keeps frequent contact with her care coordinator.

However, this also highlights how service use may increase in the shorter term, as patients access targeted preventative services they might not have engaged with otherwise.

"It's sometimes just simple things as well like [...] having an OT to assess them, [...] they might need a bath chair or railings or, just simple things like that, care link bracelets or necklace. It makes them a lot more safe." (FG)

Such patient focussed problem solving approaches have been shown to improve wellbeing and cognitive functioning (Claiborne, 2006). Furthermore, Mistry (2001) showed that patient perceived physical health was a better predictor of re-hospitalisation than professionally assessed illness ratings. This demonstrates the importance of engaging with the patient as a whole, which the team does:

"We introduce ourselves as we're here to try and keep you healthy and at home and once that's, you might have to repeat that a few times, but once that's there it's ok."
(FG)

This holistic approach that supports service users to live well by managing their conditions in the home environment has been demonstrated to be preferable to a purely clinical focus aimed at managing medical symptoms (Goodwin et al., 2013).

4. Referral to preventative services

Programme theory 4: Patients are not always aware of what services are available (Context). The CWT refers them to preventative services (M - resource). Patients are reassured that the intent is to keep them at home, and they gain increased knowledge about available services (M - reasoning). This leads to non-emergency admissions being avoided (Outcomes).

P4 is a 90-year-old patient who feels lonely (CN). She takes diuretic tablets that have led to incontinence issues. This poses a risk as she has reduced mobility (osteoporosis and rheumatoid arthritis) and therefore struggles to get to the toilet at night (CN). The Team coordinator makes a referral to a continence nurse and to Occupational Therapy for help with mobilising out of her armchair. This leads to the patient feeling reassured that the intent is to keep her in her own home, and increases her knowledge about available services. As a result, this patient has developed a trusting relationship with her CWT coordinator, whom she phones when she has any concerns. Given that she would not engage with any other statutory service, the input from the Team is preventative in its own right.

P4: "I want to be independent. And you help me to be that. As long as I can. To be independent. I struggle at times but I, I, you've helped a lot, you're there, and I know I can pick the phone up if there's going to be a problem."

Addressing this person's physical issues has provided the CWT with numerous opportunities for trust-building contacts, which has helped with loneliness, community management and preventing hospital admissions.

5. Coordination of services

Programme theory 5: A number of care professionals are involved with the patient; care plans are difficult to keep up to date when left in the patient's home, making care coordination difficult (Context). The CWT has implemented a 'message in a bottle' (M - resource), which leads the patient to feel reassured that their end of life wishes will be understood and respected by all (M - reasoning). The patient is less anxious and more likely access services appropriately, knowing that there will be continuity in care even if they need to phone the emergency services (Outcome).

One participant was suffering a bereavement and had seen his wife taken into care because of complex health issues. As a result, his emotional wellbeing was poor (CN). A number of professionals had been involved with the family, due to their vulnerable situation. The CWT implemented key resources for integrated and coordinated care with the acknowledgement, supported by the literature, that these need to remain flexible to meet changing needs (Goodwin et al., 2013). Research highlights the importance of care coordinators to continuously monitor patients' physical and mental wellbeing (Longman et

al., 2013). The CWT described some of the difficulties associated with keeping care plans up to date and keeping them confidential:

“The difficulty can be when the patient doesn’t want to share with the family. And that care plan does have their past medical history on there so that it would have to be, it would have to be discussed.” (FG)

In order to circumvent these issues, the Team have implemented ‘message in a bottle’ as a care coordination tool:

“It’s like a little, like a vitamin sized, you know, bottle, and inside it [...] a resume of their medical needs, if there’s a DNACPR [Do Not Attempt Cardiopulmonary Resuscitation] in place, next of kin details, things like if they have a pet, which older people can be very anxious about. [...] And there’s a sticker on the fridge door and on the front door or the front window so any emergency services would know” (FG)

In addition to this, good working relationships between the CWT and local services, such as a falls clinic, GP surgeries, the fire service or local councils enhanced coordination efforts. After multiple visits and discussions and at the family’s request, the Team coordinator also organised for DNACPR forms to be completed for the aforementioned patient (CN). The patient thus has peace of mind that his end of life wishes will be understood and respected by all. He is less anxious and more likely access services appropriately, knowing that his care will be coordinated between different providers even in case of an emergency.

While the literature and the focus group provided ammunition to develop this programme theory, this is the least substantiated of the theories developed in this study, but it was nevertheless felt to be important by the CWT.

Discussion

Routine local monitoring data shows a significant decrease in the frequency of both emergency admissions and emergency department attendance since the establishment of the CWT. The realist programme theories developed here provide a logical explanation for these data trends. They demonstrate that the CWT supports severely frail older people who are isolated at home, by establishing a trusting rapport with the person and having regular, reliable contacts with them, to engage them in preventative services and activities where possible. The realist programme theories overlap but tend to happen in sequence (see figure 1), with trust development being the foundation to all other possible interventions. Risk minimisation at home is sometimes helpful in order to develop trust and implement other interventions as necessary. These explanatory programme theories enable the mapping of how and when proximal and distal outcomes may be measured.

[INSERT] Figure 1: Possible progression of programme theories indicating how the CWT ‘works’.

Our study suggests that the first phases of trust development and risk minimisation at home, which encompass a full consideration of the social and physical environment within which people live, are central to the added value of the CWT compared to other services. This allows the Team coordinators to become familiar with and support severely frail older patients; they then begin to play a key role in their informal care networks (Verver et al., 2018).

Social Networks

Berkman and Glass (2000) hypothesised causal pathways through which social networks impact on health outcomes. The key constructs are integrated with our findings, focusing on four concepts. The first concept is that of social support. Berkman and Glass (2000) state that social support includes appraisal support (support in making a decision, for example with regards to DNACPR), emotional support (as provided by confidants or significant others, such as the CWT), instrumental support (for example with enabling the provision of a safer home environment) and informational support (for example in self-care advice). They also hypothesise that social influence relates to shared norms around health behaviour of network members. People obtain normative guidance by comparing their views and behaviours with those of a significant reference group or individual. The strong and trusting relationships established between patients and CWT coordinators may enable social influence. The third key construct is social engagement; the enactment of potential social ties into actual actions. This is exemplified when the CWT enables the attendance to social groups that would not have been accessed otherwise. Finally Berkman and Glass (2000) stress the importance of access to resources and material goods; this is exemplified when the Team organises home improvements to minimise risk.

It is clear from our study and the wider literature (Rico-Urbe et al., 2016, Fratiglioni et al., 2000, Hawkey and Cacioppo, 2010, Poot et al., 2016) that there is a direct link between social network structure and health. Janse et al. (2017) demonstrate that as time progresses, the role of informal carers in providing instrumental care tends to diminish and be transferred to more formal carers. In fostering trusting relationships with their patients,

and considering them within their overall social environment, the CWT is altering these supportive networks in a way that enables people to become more resilient to health stressors. This fits into conceptualisations of person centred care previously described. (Pulvirenti et al., 2012)

Figure 2 below synthesises our findings in a logic matrix that underpins the CWT interventions and the proposed causal **associations** to key outcomes. Particular emphasis is focused on the left hand side of the figure; without this work on relationship building and trust, the right hand side of the figure cannot happen. Therefore, based on our data and the literature reviewed, it is proposed that the CWT works across the five programme theories, but brings particular added value in the early stages of providing a comprehensive initial assessment, leading to the alteration of the social and physical environment within which older people live. Whilst the importance of key caring relationships have been highlighted before, (Poot et al., 2016, Spoorenberg et al., 2015) to our knowledge our study is the first to propose causal **associations** between these experiences and the kind of measured outcomes that commissioners expect to see.

[INSERT] Figure 2: The Community Wellness Team logic matrix

Limitations

This small-scale study aimed to theorise the causal **associations** between a community based intervention and proximal (e.g. patient experience) and distal (e.g. avoided hospital

admissions) outcomes. In doing so, the literature search was not systematic, but aimed to scope the literature to inform theory development. The interviews and medical case notes sample was small, and collected through local gatekeepers. However, these were the severely frail older patients' usual CWT coordinator, which minimised any potential disruption or stress and maximised participation. Whilst this might have introduced bias, this is not a consideration here as the study was participatory and explanatory in intent, rather claiming independence or objectivity. An example of this is the fact that the Team approached researchers with a hypothesised underpinning mechanism of reducing social isolation. The realist analytical process undertaken here has enabled the formulation of a programme theory around trust building and the linking of this to a broader theoretical framework on the links between social networks and health.

Programme theories 4 and 5 were not as well supported as others in this study. They were however felt to be key by the CWT and therefore, in keeping with the participatory ethos mentioned above, are presented here. A more thorough realist study would have enabled the iterative search of literature in view of the findings from the primary data.

By integrating the data collected in this study with peer reviewed articles and broader theoretical frameworks, we hope that this research creates a platform for further larger investigations into how community care, such as that provided by the CWT, can help keeping people safe at home for longer.

Conclusion

The qualitative data (interviews, focus groups and case notes) enabled us to strengthen, nuance and illustrate findings from the published literature in the generation of plausible explanatory programme theories. Our research supports claims that a change in direction is needed from ‘passive’ acknowledgement that integrated care should focus on person-centred care, to the ‘active’ participation, empowerment and leadership from staff and patients in the co-production of their health (Goodwin, 2016, Pulvirenti et al., 2012).

The CWT is one example of a way in which ‘ageing in place’ (World Health Organisation, 2015) can be achieved. In order to meet complex needs, the CWT adopts a multifaceted, flexible and holistic person centred approach that cannot and should not be replicated with fidelity. Future evaluations of similar services therefore need to acknowledge, map and evidence this complexity, rather than attempt to control it. The realist logic matrix reported here provides a template to begin doing this, through the refinement and testing of the programme theories.

References

- BASS, D., JUDGE, K., SNOW, L., WILSON, N., MORGAN, R., LOOMAN, W., MCCARTHY, C., MASLOW, K., MOYE, J., RANDAZZO, R., GARCIA-MALDONADO, M., ELBEIN, R., ODENHEIMER, G. & KUNIK, M. 2013. Caregiver Outcomes of Partners in Dementia Care: Effect of a Care Coordination Program for Veterans with Dementia and Their Family Members and Friends. *Journal of the American Geriatric Society*, 61, 1377-1386.
- BERKMAN, L. F. & GLASS, T. 2000. Social integration, social networks, social support and health. In: BERKMAN, L. F. & KAWACHI, I. (eds.) *Social Epidemiology*. Oxford: Oxford University Press.
- BROPHY, L., HODGES, C., HALLORAN, K., GRIGG, M. & SWIFT, M. 2014. Impact of care coordination on Australia’s mental health service delivery system. *Australian Health Review*, 38, 396-400.
- CATTAN, M., WHITE, M., BOND, J. & LEARMOUTH, A. 2005. Preventing social isolation and loneliness among older people: a systematic review of health promotion interventions. *Ageing and Society*, 25, 41-67.
- CLAIBORNE, N. 2006. Effectiveness of a Care Coordination Model for Stroke Survivors: A Randomised Study. *Health and Social Work*, 31, 87.

- DALKIN, S., GREENHALGH, G., JONES, D., CUNNINGHAM, B. & LHUSSIER, M. 2015. What's in a mechanism? Development of a key concept in realist evaluation. *Implementation Science* 10.
- FRATIGLIONI, L., WANG, H., ERICSSON, K., MAYTAN, M. & WINBLAD, B. 2000. Influence of social network on occurrence of dementia: a community-based longitudinal study. *Lancet*, 355, 1315-19.
- GIULI C, SPAZZAFUMO L, SIROLLA C, ABBATECOLA AM, LATTANZIO F & D, P. 2012. Social isolation risk factors in older hospitalised individuals. *Archives of Gerontology and Geriatrics*, 55, 580-585.
- GOODWIN, N. 2016. Towards People-Centred Integrated Care: From Passive Recognition to Active Co-production? *International Journal of Integrated Care* ., 16, 15.
- GOODWIN, N., SONOLA, L., THIEL V & KODNER, D. 2013. Co-ordinated care for people with complex chronic conditions: key lessons and markers for success. London: The King's Fund.
- HAWKLEY, L. & CACIOPPO, J. 2010 Loneliness Matters: A Theoretical and Empirical Review of Consequences and Mechanisms. *Annals of Behavioural Medicine*, 40.
- IMISON, C., CURRY, N., HOLDER, H., CASTLE-CLARKE, S., NIMMONS, D., APPLEBY, J., THORLBY, R. & LOMBARDO, S. 2017. Shifting the balance of care. Great Expectations. *Research Report*. Nuffield Trust.
- JANSE, B., HUIJSMAN, R., LOOMAN, W. M. & FABBRICOTTI, I. N. 2017. Formal and informal care for community-dwelling frail elderly people over time: a comparison fo integrated and usual care in the Netherlands. *Health and Social Care in the Community*, DOI: 10.1111/hsc.12516.
- LEBLANC, R. & JACELON, C. 2018. Self-care among older people living with chronic conditions. *International Journal of Older People Nursing*, DOI: 10.1111/opn.12191.
- LONGMAN, J., PASSEY, M., SINGER, J. & MORGAN, G. 2013. The role of social isolation in frequent and/or avoidable hospitalisation: rural community-based service providers' perspectives. *Australian Health Review*, 37, 223-231.
- MCDONALD, K., SUNDARAM, V., BRAVATA, D., LEWIS, R., LIN, N., KRAFT, S., MCKINNON, M., PAGUNTALAN, H. & OWENS, D. 2007. Closing the Quality Gap: A Critical Analysis of Quality Improvement Strategies. In: SHOJANIA, K., MCDONALD, K., WACHTER, R. & OWENS, D. (eds.) *Technical Review*.
- MISTRY R, ROSANSKY J, MCGUIRE J, MCDERMOTT C & JARVIK L 2001. Social isolation predicts re-hospitalisation in a group of older American veterans enrolled in the UPBEAT program. *International Journal of Geriatric Psychiatry*, 16, 950-959.
- MISTRY, R., ROSANSKY, J., MCGUIRE, J., MCDERMOTT, C., JARVIK, L. & GROUP, U. C. 2001. Social isolation predicts re-hospitalisation in a group of older American veterans enrolled in the UPBEAT Program *International Journal of Geriatric Psychiatry*, 16, 950-959.
- NAITHANI, M., GULLIFORD, M. & MORGAN, M. 2006. Patients' perceptions and experiences of 'continuity of care' in diabetes. *Health Expectations*, 9.
- NATIONAL COALITION ON CARE COORDINATION. *Health and Aging* [Online]. Available: <https://www.rush.edu/national-coalition-care-coordination> [Accessed 2018].
- PAWSON, R. & MANZANO-SANTAELLA, A. 2012. A realist diagnostic workshop. *Evaluation*, 18.
- PAWSON, R. & TILLEY, N. 1997. *Realistic evaluation*, London, SAGE.
- PEARSON, M., HUNT, H., COOPER, C., SHEPPERD, S., PAWSON, R. & ANDERSON, R. 2015. Providing effective and preferred care closer to home: a realist review of intermediate care. *Health and Social Care in the Community*, 23, 577-593.
- PEIKES, D., CHEN, A., SCHORE, J. & BROWN, R. 2009. Effects of Care Coordination on Hospitalization, Quality of Care, and Health Care Expenditures Among Medicare *JAMA*, 301, 603-618.
- POOT, A., CALJOUW, M., DE WAARD, C., WIND, A. & GUSSEKLOO, J. 2016. Satisfaction in Older Persons and General Practitioners during the Implementation of Integrated Care. *PLOS One*, 11 e0164536.
- PULVIRENTI, M., MCMILLAN, J. & LAWN, S. 2012. Empowerment, patient centred care and self-management. *Health Expectations*, 17, 303-310.

- RICO-URIBE, L., CABALLERO, F., OLAYA, B., TOBIASZ-ADAMCZYK, B., KOSKINEN, S., LEONARD, M., HARO, J., CHATTEJI, S., AYUSO-MATEOS, J. & MIRET, M. 2016. Loneliness, social networks and health: a cross-sectional study in three countries. *PLOS One*, 11.
- ROLAND, M., LEWIS, R., STEVENTON, A., ABEL, G., ADAMS, J., BARDSLEY, M., BRERETON, L., CHITNIS, X., CONKLIN, A., STAETSKY, L., TUNKEL, S. & LING, T. 2012. Case management for at-risk elderly patients in the English integrated care pilots: observational study of staff and patient experience and secondary care utilisation. *International Journal of Integrated Care*, 12.
- RUSSEL, C. & SCHOFIELD, T. 1999. Social isolation in old age: a qualitative exploration of service providers' perceptions. *Ageing and Society*, 19, 69-91.
- SHERIDAN, N., KENEALY, T., JD, K., SCHMIDT-BUSBY, J., HAND, J., RAPHAEL, D., MCKILLOP, A. & REA, H. 2012. Patients' engagement in primary care: powerlessness and compounding jeopardy. A qualitative study. *Health Expectations*, 18, 32-43.
- SPOORENBERG, S., WYNIA, K., FOKKENS, A., SLOTMAN, K., KREMER, H. & REIJNEVELD, S. 2015. Experiences of Community-Living Older Adults Receiving Integrated Care Based on the Chronic Care Model: A Qualitative Study. *PLoS ONE*, 10, e0137803.
- SZANTON, S., WOLFF, J., LEFF, B., THORPE, R., TANNER, E., BOYD, C., XUE, Q., GURALNIK, J., BISHAI, D. & GITLIN, L. 2014. CAPABLE trial: A randomized controlled trial of nurse, occupational therapist and handyman to reduce disability among older adults: Rationale and design. *Contemporary Clinical Trials*, 38, 102-112.
- VERVER, D., MERTEN, H., ROBBEN, P. & WAGNER, C. 2018. Care and support for older adults in the Netherlands living independently. *Health and Social Care in the Community*, 10.1111/hsc.12539.
- WESTHORP, G., PRINS, E., KUSTERS, C., HULTINK, M., GUIJT, I. & ET AL 2011. Realist evaluation: an overview: report from an expert seminar. The Netherlands.: Wageningen UR Centre for Development Innovation.
- WINDLE, G., HUGHES, D., LINCK, P., MORGAN, R., BURHOLT, V., EDWARDS, R., REEVES, C., YEO, S., WOODS, B. & RUSSELL, I. 2011. Public health interventions to promote mental well-being in people aged 65 and over: systematic review of effectiveness and cost-effectiveness. Bangor: Institute of Medical and Social Care Research, University of Wales.
- WODCHIS, W., DIXON, A., ANDERSON, G. & GOODWIN, N. 2015. Integrating care for older people with complex needs: key insights and lessons from a seven-country cross-case analysis. *Research and Theory*, 15.
- WORLD HEALTH ORGANISATION 2015. World Report on Ageing and Health.